

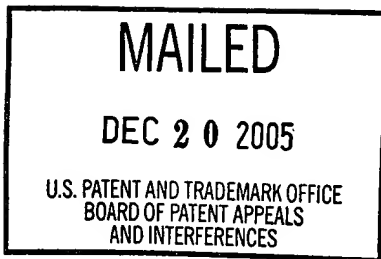
The opinion in support of the decision being entered today was not written for publication and is not binding precedent of the Board.

## UNITED STATES PATENT AND TRADEMARK OFFICE

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### BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

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Ex parte KARIM M. T. LEFKI et al.

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Appeal No. 2005-2088  
Application No. 09/548,730

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ON BRIEF

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Before FRANKFORT, McQUADE, and NASE, Administrative Patent Judges.  
NASE, Administrative Patent Judge.

### DECISION ON APPEAL

This is a decision on appeal from the examiner's final rejection of claims 1, 6, 9, 10, 12 and 14 to 16. Claims 2 to 5, 7, 8, 11 and 13, which are all of the other claims pending in this application, have been objected to as depending from a non-allowed claim.

We AFFIRM-IN-PART.

### BACKGROUND

The appellants' invention relates to a hair-removing device provided with a laser source, an adjustable laser beam manipulator for positioning a laser beam supplied by the laser source during operation in a target position on a skin to be treated, and an image sensor for detecting an image of at least a portion of the skin (specification, p. 1). A copy of the claims under appeal is set forth in the appendix to the appellants' brief.

Claims 1, 6, 9, 10, 12 and 14 to 16 stand rejected under 35 U.S.C. § 103 as being unpatentable over U.S. Patent No. 5,653,706 to Zavislan et al. (Zavislan) in view of U.S. Patent No. 6,074,382 to Asah et al. (Asah) .

Rather than reiterate the conflicting viewpoints advanced by the examiner and the appellants regarding the above-noted rejection, we make reference to the answer (mailed May 15, 2003) for the examiner's complete reasoning in support of the rejection, and to the brief (filed February 24, 2003) and reply brief (filed July 14, 2003) for the appellants' arguments thereagainst.

### OPINION

In reaching our decision in this appeal, we have given careful consideration to the appellants' specification and claims, to the applied prior art references, and to the

respective positions articulated by the appellants and the examiner. As a consequence of our review, we make the determinations which follow.

Claims 1 and 15, the independent claims under appeal, read as follows:

1. A hair-removing device comprising a laser source, an adjustable laser beam manipulator for positioning a laser beam supplied by the laser source during operation in a target position on a skin to be treated, and an image sensor for detecting an image of at least a portion of the skin, wherein the laser source is controllable by means of an electrical control unit; which control unit during operation determines the target position of the laser beam as a function of a position and/or orientation on the skin of a hair to be removed as determined from the image by the control unit, and which control unit activates the laser source the moment the laser beam manipulator is in a position which corresponds to the target position of the laser beam.

15. A device for removing hair from skin comprising:  
a laser source for providing a laser beam;  
means for positioning the beam;  
means for creating a two-dimensional image of at least a portion of the skin;  
control means for:  
responsive to the image, determining a position and/or orientation of a hair to be removed from the skin;  
second determining a target position for the laser beam as a function of the position and/or orientation;  
causing the means for positioning to assume a configuration corresponding to the laser beam striking target position; and  
activating the laser source when the means for positioning has achieved the configuration.

In the rejection under appeal (answer, pp. 4-6), the examiner (1) set forth the pertinent teachings of Zavislan and Asah; ascertained<sup>1</sup> that the system of Zavislan is user controlled and "is not electronically/automatically controlled by the combination of the controller and the image sensor in a manner similar to that of the instant claims;" and (3) concluded that it would have been obvious to one having ordinary skill in the art at the time of the appellants' invention to modify Zavislan in view of Asah to automate the hair removal device, as suggested by Asah, "in order to reduce the duration needed for the removal of all hairs. This would further enable untrained individuals and/or a patient to use the system."

The appellants do not contest the obviousness of combining the teachings of Zavislan and Asah. The appellants do contest that such a combination of Zavislan and Asah arrives at the subject matter of either claim 1 or claim 15. The appellants argue (brief, p. 4) that the examiner has "missed the fact that the independent claims 1 and 15 both call for control unit to determine the target position of the laser beam as a function of a position and/or orientation on the skin of a hair, and not a follicle." The appellants point out that this language requires "an algorithm that uses the 'position and/or

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<sup>1</sup> After the scope and content of the prior art are determined, the differences between the prior art and the claims at issue are to be ascertained. Graham v. John Deere Co., 383 U.S. 1, 17-18, 148 USPQ 459, 467 (1966).

orientation on the skin of the hair' to determine/project the 'target position' of the laser beam."

We agree with the appellants (reply brief, pp. 3-4) that before the process of Asah can be carried out to remove hair it is necessary for the skin to be "clean" shaven. While this is not expressly stated in Asah, we believe it is inherent from the express teachings of Asah. We also agree with the examiner (answer, pp. 7-8) that if one detects the position of a hair follicle, the position/location of the hair issuing from such follicle is inherently detected. Thus, the process of Asah carried out to remove hair will inherently determine the target position of the laser beam as a function of the position of both the follicle and the clean shaven hair within the follicle.

With respect to claim 1, we agree with the examiner that the combined teachings<sup>2</sup> of Zavislan and Asah would have made it obvious at the time the invention was made to a person having ordinary skill in the art to have modified Zavislan so as to arrive at the subject matter of claim 1. In that regard, the combined teachings of

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<sup>2</sup> The test for obviousness is what the combined teachings of the references would have suggested to one of ordinary skill in the art. See *In re Young*, 927 F.2d 588, 591, 18 USPQ2d 1089, 1091 (Fed. Cir. 1991) and *In re Keller*, 642 F.2d 413, 425, 208 USPQ 871, 881 (CCPA 1981). Moreover, in evaluating such references it is proper to take into account not only the specific teachings of the references but also the inferences which one skilled in the art would reasonably be expected to draw therefrom. *In re Preda*, 401 F.2d 825, 826, 159 USPQ 342, 344 (CCPA 1968).

Zavislan and Asah would have been suggestive of modifying Zavislan as suggested by Asah to automate the hair removal device by determining the target position of the laser beam as a function of the position of both the follicle and the clean shaven hair within the follicle thus arriving at the subject matter of claim 1. Specifically, such a combination of Zavislan and Asah would determine the target position of the laser beam as a function of the position on the skin of the hair to be removed (i.e., the position of both the follicle and the clean shaven hair within the follicle).

For the reasons set forth above, the subject matter of claim 1 is suggested by the combined teachings of Zavislan and Asah. Accordingly, the decision of the examiner to reject claim 1 under 35 U.S.C. § 103 is affirmed.

With regard to dependent claims 6 and 9, the appellants argue (brief, pp. 10-11) that neither Zavislan or Asah suggest that both position **and** orientation of the hair be used in determining the target position. We agree. As set forth above, it is our opinion that Asah inherently determines the target position of the laser beam as a function of the position of both the follicle and the clean shaven hair within the follicle. As such, Asah does not utilize the orientation of the hair in determining the target position. Thus, we believe that the subject matter of claims 6 and 9 are not suggested by the combined

teachings of Zavislan and Asah. Accordingly, the decision of the examiner to reject claims 6 and 9 under 35 U.S.C. § 103 is reversed.

With regard to dependent claim 10, the appellants argue (brief, p. 10) that a separate illumination member for illuminating at least the portion of the skin which is to be detected by the image sensor is not suggested by either Zavislan or Asah. We disagree. Zavislan teaches a lamp 52 (see Figure 3) that illuminates at least the portion of the skin which is to be detected by the image sensor. Thus, we believe that the subject matter of claim 10 is suggested by the combined teachings of Zavislan and Asah. Accordingly, the decision of the examiner to reject claim 10 under 35 U.S.C. § 103 is affirmed.

With regard to dependent claims 12 and 14, the appellants argue (brief, p. 12) that the subject matter of claims 12 and 14 is not suggested by Asah. We disagree. In that regard, the subject matter of claim 12 (i.e., means for determining an actual position of the laser beam on the skin from the image detected by the image sensor) is taught by Zavislan. Likewise, the subject matter of claim 14 (i.e., for determining the actual position of the laser beam on the skin, the control unit activates the laser source at a comparatively low energy density) is taught by Zavislan (see, for example, column 4, lines 60-67; column 7, lines 7-14). Thus, we believe that the subject matter of claims 12

and 14 are suggested by the combined teachings of Zavislan and Asah. Accordingly, the decision of the examiner to reject claims 12 and 14 under 35 U.S.C. § 103 is affirmed.

With respect to claim 15, the appellants make the same argument as they presented above with respect to claim 1. We find that argument likewise unpersuasive with respect to the subject matter of independent claim 15. In that regard, claim 15 does not even require the target position of the laser beam to be determined as a function of a position and/or orientation on the skin of a hair to be removed. Instead, claim 15 requires the target position of the laser beam to be determined as a function of a position and/or orientation of a hair to be removed from the skin. We believe that this limitation is suggested and taught by Asah which as pointed out above determines the target position of the laser beam as a function of the position of both the follicle and the clean shaven hair within the follicle.

For the reasons set forth above, we believe that the subject matter of claim 15 is suggested by the combined teachings of Zavislan and Asah. Accordingly, the decision of the examiner to reject claim 15 under 35 U.S.C. § 103 is affirmed.

With regard to dependent claim 16, the appellants argue (brief, p. 13) that "[w]hile the hair root is received in the follicle, there is no suggestion in either of



Zavislan or Asah that detection of hair as opposed to hair follicles, be used to determine the target position." We disagree. As set forth above, it is our opinion that Asah inherently determines the target position of the laser beam as a function of the position of both the follicle and the clean shaven hair within the follicle. Thus, we believe that the subject matter of claim 16 is suggested by the combined teachings of Zavislan and Asah. Accordingly, the decision of the examiner to reject claim 16 under 35 U.S.C. § 103 is affirmed.

#### CONCLUSION

To summarize, the decision of the examiner to reject claims 1, 6, 9, 10, 12 and 14 to 16 under 35 U.S.C. § 103 is affirmed with respect to claims 1, 10, 12, 14, 15 and 16 and reversed with respect to claims 6 and 9.

AFFIRMED-IN-PART

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